



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,945	11/04/2005	Martin Weston	P-7600-US	4900
49443	7590	01/14/2011	EXAMINER	
Pearl Cohen Zedek Latzer, LLP			KOSTAK, VICTOR R	
1500 Broadway				
12th Floor			ART UNIT	PAPER NUMBER
New York, NY 10036			2422	
			NOTIFICATION DATE	DELIVERY MODE
			01/14/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@pczlaw.com
Arch-USPTO@pczlaw.com

Office Action Summary	Application No.	Applicant(s)
	10/520,945	WESTON ET AL.
	Examiner	Art Unit
	Victor Kostak	2422

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 December 2010.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-34 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 5-8, 12-19 and 22-34 is/are allowed.
 6) Claim(s) 1-4, 9-11, 20 and 21 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ . |

1. Applicant's arguments filed on 12/27/10 have been fully considered but they are not persuasive. The previous rejection based on the May reference accordingly still applies and is presented below, repeated from the last Office action.

Applicant's arguments are addressed in **bold** to distinguish that text from the copied text.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 9-11, 20 and 21 **stand** rejected under 35 U.S.C. 102(b) as being anticipated by May (6,067,125) cited by applicant.

Reviewing May (Fig. 1), **he** applies both spatial and temporal filtering to an input video signal, wherein the spatial filtering is a recursive process (e.g. col. 5 lines 4-32 describing a Wiener filter which is recursive) and the temporal non-recursive.

The input video signal is decompose into spatial frequencies (not shown: discussed in col. 4 lines 20-25 covering luma and chroma bands: also MPEG processing which covers DCT frequency transform components discussed in col. 1 lines 25-37).

Applicant argues that May does not include processing (specifically recursive and non-recursive) of plural (specifically “at least two”) high frequency bands, and refers to text in col. 4 lines 20-25 of May, as cited by the examiner.

The examiner points out that in the immediately-following text that May specifies that he can also apply the chroma band signals (which meets the “at least two high

frequency bands) as well as the single luma (low frequency) band signal. Specifically both filters 101 and 102 would receive the plural chrominance components (typically Cr and Cb with the Y signal forming the total video band), noting col. 4 lines 25-29. This language covering the filter processing of the chroma bands as well as the luma band therefore meets the language of the claim.

Applicant is further informed that the MPEG data (expressly disclosed by May) that is typically composed of spatially-separated transform coefficients would comprise a range of low-to-high frequencies, and would also be applied to the filtering.

Non-linear processing is applied to the filtering (e.g. col. 3 line 66 – col. 4 line 7), thereby meeting claim 1.

Applicant did not address the dependent claims on their own, instead relying on their respective base claims (particularly the independent claims). Because the base claims remain rejected, so do the dependent claims.

As for claim 2, the non-linear processing is ultimately based on the magnitude (or amplitude, intensity) of the video signal being processed.

As for claim 4, the frequency bands (as an MPEG formatted video signal being processed into blocks of DCT transforms) is characterized by plural low to high bands in block units (i.e. two-dimensional bands).

Regarding claim 9, the recursive processing (done by stage 102) is subsequently processed according to motion compensation (e.g. col. 2 lines 43-51).

As for claim 10, both the spatial and temporal filtering is applied to the DCT-transformed blocks of video as an MPEG signal which plural blocks (typically 8 x 8 pixel units square)

comprise different spatial frequency bands. Also, luma and dual chroma signals also are characterized by different frequency bands, and the combining filter 102 is recursive (a temporal IIR filter, which is recursive, can also be used: col. 3 lines 44-55). The signals which comprise plural blocks of different bands from stages 102 and 101 are combined, which 8 x 8 blocks go beyond at least three in forming each frame of video, thereby meeting claim 10.

Considering claim 11, the temporal (non-recursive) and spatial (recursive) filtering is combined at stage 104.

As for claims 20 and 21, the filtering as a function of detected motion, as discussed above (again col. 2 lines 43-51), which can be considered adaptive to motion or which compensates for motion.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 **stands** rejected under 35 U.S.C. 103(a) as being unpatentable over May.

It would have been obvious to one of ordinary skill in the art to consider the non-linear processing as instantaneously gain dependent on instantaneous amplitude because the video sequence is compensated for on a continuous real-time basis where the imagery is modified (on the amplitude parameter) the instant the filtering is applied.

4. Claims 5-8, 12-19 and 22-34 **remain** allowable over the prior art.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is (571) 272-7348. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Harold can be reached on (571) 272-7519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Or faxed to:

(571) 273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (703) 308-HELP.

/Victor R. Kostak/
Primary Examiner
Art Unit 2622

VRK

Application/Control Number: 10/520,945
Art Unit: 2422

Page 7